AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (withdrawn) A transistor for active matrix display comprising a microcrystalline silicon film and an insulator, the crystalline fraction being above 80%, wherein it comprises a plasma treated interface located between the insulator and the microcrystalline silicon film so that the said transistor has a linear mobility equal or superior to 1.5 cm2W1s~1, shows threshold voltage stability and wherein the microcrystalline silicon film comprises grains whose size ranges between 10 nm and 400 nm.

2. (withdrawn) A transistor for active matrix display according to claim 1, wherein said grain size ranges between 100 nm and 200 nm.

3. (withdrawn) A transistor for active matrix display according to claim 1, wherein the microcrystalline silicon film thickness is comprised between 100 nm and 450 nm.

4. (withdrawn) A transistor for active matrix display according to claim 1, wherein said transistor has a top-gate electrode.

5. (withdrawn) A transistor for active matrix display according to claim 1 wherein said transistor has a bottom-gate electrode.

6. (withdrawn) A display unit having a line-column matrix of pixels that are actively addressed, wherein each pixel comprises at least a transistor according to claim 1.

7. (withdrawn) A display unit according to claim 6, wherein said pixels comprise light emissive organic materials.

8. (withdrawn) A display unit according to claim 6, wherein said pixels comprise liquid crystals.

9. (withdrawn) A display unit according to claim 6, wherein said pixels comprise light emissive polymer materials.

10. (withdrawn) A display unit according to claim 6, wherein electronic control means to drive each pixel are at least

partially integrated on the corresponding microcrystalline silicon film.

11. (currently amended) A method for producing a transistor for active matrix display comprising the steps of:

forming an active material and electrodes on a substrate, said active material being formed using a vapor deposition method; [[and]]

forming an insulator on top of said active material and electrodes~~, wherein,~~;

forming a plasma treated interface ~~is formed~~ on top of said insulator[[,]]; and

forming a microcrystalline silicone film ~~is formed~~ on top of said treated interface at a temperature ~~comprised~~ between 100 and 400°C using at least a deposition chemical element and a crystallisation chemical element, wherein,

said microcrystalline silicon film comprises a crystalline fraction of above 80% and said microcrystalline silicon film comprises grains of a size between 10 nm and 400 nm, [[and]]

said plasma treated interface is selected from the group consisting of a SiN_x layer, a SiN_xO_y layer, a $Si0_2$ layer and glass, [[and]]

said plasma treated interface is formed using a gas, said gas selected from the group consisting of N_2, 0_2, N_20 and NH_3, and

the transistor has a linear mobility greater than or equal to 1.5 $cm^2V^{-1}s^{-1}$.

12-13. (cancelled)

14. (previously presented) The method for producing a transistor according to claim 11, wherein the microcrystalline silicon film is formed using a buffer gas selected from the group consisting of Ar, Xe, Kr and He.

15. (currently amended) The method for producing a transistor according to claim 11, wherein said crystallisation chemical ~~elements~~ element is H_2.

16. (currently amended) The method for producing a transistor according to claim 11, wherein said deposition chemical ~~elements are~~ element is selected from the group consisting of SiH_4 and SiF_4.

17. (currently amended) The method for producing a transistor according to claim 11, wherein said deposition chemical ~~elements generate~~ element generates a flux and said crystallisation chemical ~~elements generate~~ element generates a flux, both of which are at equilibrium during the growth of the microcrystalline silicon film.

18-19. (cancelled)

20. (withdrawn) A method for producing a transistor according to claim 11, wherein one forms a bottom gate transistor.

21. (withdrawn) A method for producing a transistor according to claim 20, wherein the substrate comprises a gate electrode.

22. (cancelled)

23. (previously presented) The method for producing a transistor according to claim 11, wherein the microcrystalline silicon film thickness is comprised between 100 nm and 450 nm.

24. (currently amended) The [[A]] method for producing a transistor according to claim 11, wherein the microcrystalline silicon film is produced by a hot wire technique.

25. (previously presented) The method for producing a transistor according to claim 11, wherein the microscrystalline silicon film is produced by a radiofrequency glow discharge technique.

26. (previously presented) The method for producing a transistor according to claim 11, wherein the vapor deposition methods use a radiofrequency glow discharge technique.

27. (previously presented) The method for producing a transistor according to claim 26, wherein the vapor deposition methods uses a 13.56 MHz PECVD reactor.